Chapter 1: The Massachusetts Tobacco Control Program, 1993-2001

This report describes the structure of the Massachusetts Tobacco Control Program in fiscal year 2001 (July 2000 – June 2001) and examines the extent to which the program's goals have been achieved. The data show a comprehensive program with very substantial accomplishments.

Since the period examined in this report, budgetary pressures in Massachusetts have forced dramatic cutbacks in the program. The program budget was cut from $34 million in FY 2002 to less than $6 million for FY 2003. Major elements of the program have been eliminated, and the surviving elements are operating at substantially reduced levels.

The details and the effects of these budgetary changes are not covered in this report. The report was originally intended to focus on the program as it operated through the end of fiscal year 2001 (June 2001) and achievements to that point. Because it is not clear whether reports will be prepared for subsequent fiscal years (the evaluation was one casualty of the budget cuts), we have included any data for fiscal year 2002 that were available by October 2002. These data may serve as a baseline for future analyses of the effects of program cutbacks.

Program Objectives, Structure, and Services in Fiscal Year 2001

Since its inception, the Massachusetts Tobacco Control Program (MTCP) has pursued three central public health objectives:

- **Preventing** young people from using tobacco products by educating them and reducing their access to tobacco products;
- **Persuading and helping** smokers to quit smoking, thereby reducing adult smoking prevalence; and
- **Protecting** non-smokers by reducing their exposure to environmental tobacco smoke (ETS).

The intent is to reduce the toll of smoking on Massachusetts residents' lives and pocketbooks. This toll currently includes an estimated 9,300 deaths, $2.8 billion in medical costs, and $1.6 billion in lost productivity in Massachusetts each year.[1,2] Notably, the estimate of lives lost due to smoking-related

causes has decreased from over 10,000 in 1996 to under 9,300 in 2000. Smoking currently accounts for 17 percent of all deaths to Massachusetts residents over age 35.[1]

Working to "Make Smoking History," MTCP integrates the efforts of public health professionals, voluntary organizations, advocates, the research community and the public and private sectors. Exhibit 1.1 depicts the advisory committees, funded programs and infrastructure through which MTCP operates. Regional Steering Committees coordinate and guide a mix of programs responding to the distinct needs of different parts of the Commonwealth. The major programmatic initiatives are described below.

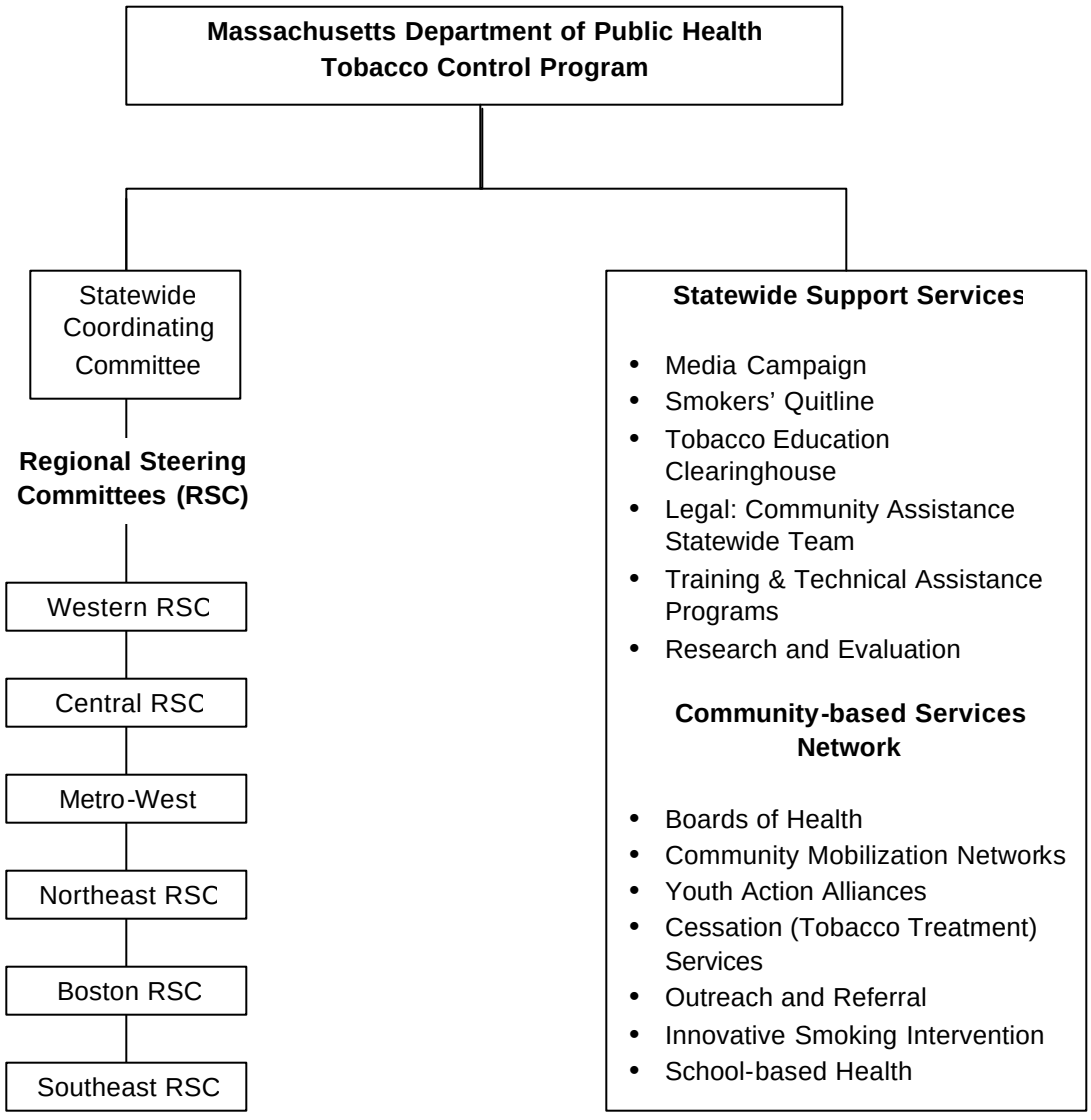
Media campaign

MTCP activities began in October of 1993 with a media campaign designed to reach large audiences and provide information about the negative health effects of smoking. Until it was largely discontinued midway through fiscal year 2001, the campaign was designed to educate Massachusetts residents about:

- the health consequences of smoking;
- resources to help smokers quit smoking;
- the danger of secondhand smoke;
- product content, i.e. the dangerous chemicals contained in the product;
- tobacco industry manipulation to increase habituation; and
- tobacco industry advertising practices that promote use, especially first use by youth.

The *Public Education Media Campaign* targeted the general population and was aimed at raising awareness of an important public health issue, tobacco control. The general campaign explained tobacco control issues to the public and communicated a "call to action." *Strategic and Targeted Marketing* focused on selected populations, such as populations with high smoking prevalence, with customized messages. Both components of the media campaign used tailored public relations and advertising initiatives to complement community-based strategies such as working with the community's largest vulnerable populations.

Exhibit 1.1
Massachusetts Tobacco Control Program
Organizational Chart



MTCP community-based programs

In late 1993 and early 1994, MTCP began funding statewide, regional, and local tobacco control programs and services. MTCP entered fiscal year 2001 with six types of local programs, organized into two categories: (1) Policy Promotion and Enforcement; and (2) Targeted Community Smoking Interventions. These program categories are described briefly below. More detail on the programs' locations and the services they provide is presented in the appendix tables, and further description of program activities can be found in previous Annual Reports.[3]

Policy promotion and enforcement. Three types of local programs raise public awareness about the health issues related to tobacco use, the strategies used by the tobacco industry to promote use, and the need to change social norms and public policy around tobacco use. These programs actively support tobacco control regulations and enforcement activities in their cities and towns, as described below.

- ***Boards of Health/Health Departments*** raise public awareness of the need for tobacco control public policy initiatives. Boards of Health are funded primarily to enact and enforce local ordinances and regulations designed to make it harder for youth to buy tobacco products from retail establishments and vending machines, and to protect the public from environmental tobacco smoke. In 2001, 75 Boards and collaboratives (multiple Boards acting as a group) were funded in 307 of the 351 cities and towns in Massachusetts. The budget cuts in fiscal year 2003 reduced the number of funded Boards and collaboratives to 20, covering 162 cities and towns but operating at lower levels of funding than in past years.

- ***Tobacco Free Community Mobilization Networks (CMN)*** engage in grass roots community education and mobilization to raise public awareness about the health issues related to tobacco use, the strategies used by the tobacco industry to promote use, and the need to change social norms and public policy around tobacco use. In 2001, 20 Community Mobilization Networks, each covering geographic areas with populations of 125,000 or greater, assisted local tobacco control programs to plan and coordinate activities. Eleven CMNs continued operation after the 2003 budget cuts, although at reduced levels.

- ***Youth Action Alliances*** are structured youth skill-building programs that foster youth leadership in tobacco control. Structured experiences within the 47 programs include policy-related activities such as designing and conducting attitude and behavior surveys;

community mapping of industry advertising practices; developing, passing, and enforcing a tobacco control regulation or law; and media advocacy. This program was eliminated in fiscal year 2003.

Targeted Community Smoking Intervention Programs (TCSIP). TCSIPs serve both youth and adults and target high-risk populations to engage them in the process of changing their attitudes and behaviors around tobacco use. Three types of programs have been funded.

- ***Tobacco Treatment Services (TTS).*** Tobacco Treatment Services are located in hospitals, health centers and other community-based agencies. The 87 programs funded in 2001 offered assistance to smokers in the form of behavioral counseling, combined with pharmacological treatments. Counselors are required to participate in an intensive, year-long certification process provided by the University of Massachusetts Medical Center. Funding for TTS programs was eliminated in fiscal year 2003.

- ***Outreach and Referral Programs (O&R)*** extend the reach of Tobacco Treatment Services by targeting hard-to-reach populations that may not take advantage of these treatment services without encouragement and support. Twenty programs were funded in 2001 to carry out individualized interventions and specific referral arrangements (e.g. appointments) that result in a completed visit to a Tobacco Treatment Specialist, and may include transportation and childcare. O&R funding was cut substantially in fiscal year 2002 and no programs were funded in FY 2003.

- ***Innovative Smoking Intervention Programs (ISI)*** are aimed at populations that are unlikely to use center-based Tobacco Treatment Services, such as homebound or institutionalized populations, women with young children, recent immigrants who do not speak English. The 31 one ISI programs funded in 2001 were to identify smokers and help them to quit smoking, working in settings that range from the smoker's home to a prison. The programs may also engage the target population and community leaders in changing social norms around tobacco use by supporting the enactment of local tobacco control regulations or laws. The ISI program modality was eliminated in FY 2003.

MTCP statewide programs and services

The Massachusetts Tobacco Control Program has funded the following statewide projects to deliver services to the general population and/or to support community-based tobacco control programs and health care providers statewide.

- ***The Smoker's Quitline*** (1-800-TRY-TO-STOP), operated by the John Snow Institute, Inc. as part of the MTCP Resource Center, provides free, confidential telephone information, support, and immediate counseling or referrals for callers at any phase in the quitting process. The call center also provides information to the general public on issues such as environmental tobacco smoke. The program maintains a website, www.trytostop.org, that accepts input from smokers and produces a customized, personal quit plan.

- ***QuitWorks*** is a collaboration of the Department of Public Health and all major health plans in Massachusetts, linking 12,000 health care providers and their patients to proactive telephone counseling. QuitWorks is designed to make it easier for providers to connect their patients who smoke with affordable, evidence-based tobacco treatment. QuitWorks features a standardized patient referral form, an Office Practice Implementation Kit, physician feedback reports on patient progress, and summary reports to health plans. Because QuitWorks began in May 2002, its effects are not included in the outcome measures presented in this report.

- ***The Tobacco Education Clearinghouse***, the other part of MTCP Resource Center, assesses and acquires new tobacco education materials from sources nationally; develops materials to meet MTCP needs; and fills orders for tobacco education materials, shipping within the state and nationally. The Clearinghouse also offers training and technical assistance on educational materials development to community-based programs.

- ***Institutional Capacity Building Projects*** educate their memberships or their constituencies to support tobacco control initiatives. For example, ten Regional Prevention Centers and the Tobacco Control Statewide Training Center provide technical support to local tobacco control programs, regional Steering Committees, and public schools. The Community Assistance Statewide Team (CAST) provides technical assistance to local boards of health and health departments as they pass tobacco control regulations in their communities and work to change social norms around tobacco use.

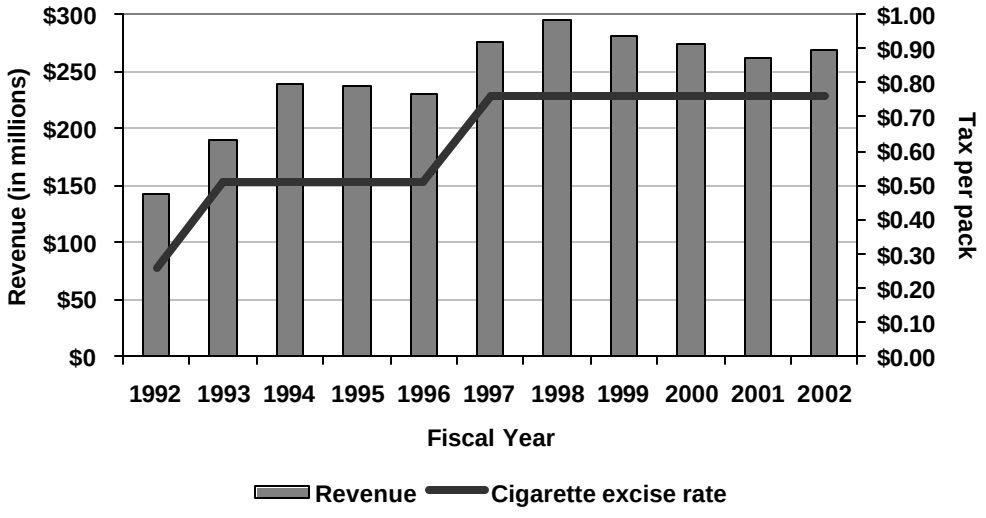
- ***Community Marketing Initiative*** grants of up to $60,000 were available to collaborative groups of MTCP programs. The grants enable programs to reach large areas with similar messages through innovative media such as buses shrink-wrapped with tobacco control messages, pre-movie advertising, and sequential advertising in weekly newspapers. No grants were available in FY 2003.

The tobacco excise tax

Complementing the program activities of the MTCP, the tobacco excise tax is an important part of Massachusetts' tobacco control effort. The tax has the effect of raising the price of the taxed tobacco products. Taxes and tobacco control programming have both been shown to reduce tobacco consumption.[4] Massachusetts' cigarette excise tax was raised from $0.26 per pack to $0.51 per pack in 1993, following the Question 1 referendum, to $0.76 in 1996, and to $1.51 in 2002. The tax on smokeless tobacco, which was 25 percent of the wholesale price before Question 1, was raised to 50 percent in 1993, to 75 percent in 1996, and to 90 percent in 2002. A cigar excise tax of 15 percent of the wholesale price was established in 1996 and raised to 30 percent in 2002.

The excise taxes play the dual role of discouraging tobacco use and providing revenue to the Commonwealth of Massachusetts. In fiscal year 2002, the cigarette tax generated revenue of $269 million, with another $6 million coming from the smokeless tobacco and cigar and smoking tobacco taxes. Exhibit 1.2 shows the cigarette excise tax rates and revenues since 1992 (the most recent increases took effect in July 2002, which is in fiscal year 2003 and not shown on the chart).

Exhibit 1.2
Massachusetts cigarette excise tax rates and revenues, 1992-2001



Source: Massachusetts Department of Public Health

Funding and Budget

MTCP is funded mainly by appropriations from the Health Protection Fund, which receives revenue from a 25 cent component of the excise tax on each pack of cigarettes and each unit of smokeless tobacco sold in the Commonwealth. The Massachusetts legislature appropriates funds from the Health Protection Fund each year. The establishing legislation specifies that the funds may be used for various tobacco control activities, for monitoring tobacco-related mortality and morbidity, and for the incorporation of tobacco-related activities into comprehensive school health education programs, community health centers, and prenatal and maternal care programs.[5]

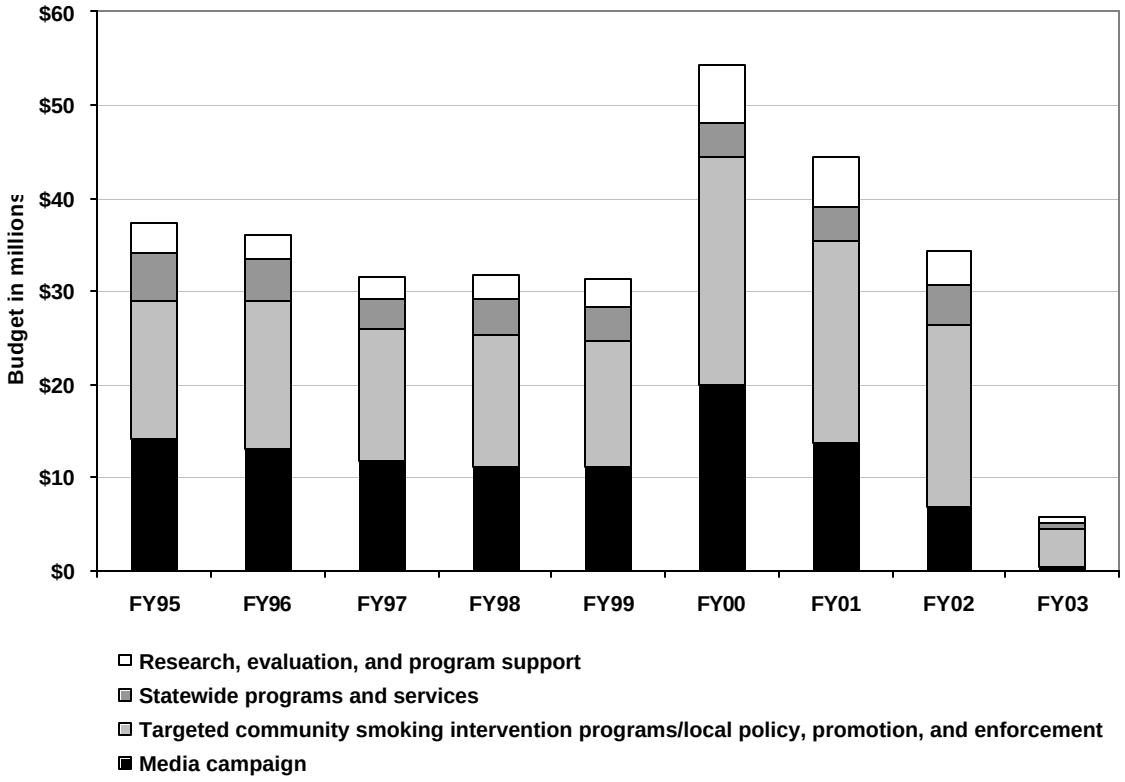
Appropriations from the Health Protection Fund, which ranged from $113 million to $130 million annually from 1994-2001, target a range of health protection programs including tobacco education and surveillance. The MTCP budget accounts for only a portion of the Fund's appropriation, however, ranging from $37 million to $31 million from 1995 through 1999.[6] Beginning in 1999, some funding was received from the Centers for Disease Control and Prevention. In 2000, the MTCP budget grew to $54 million because of additional funding from the Master Settlement Agreement between the attorneys general of 46 states, including Massachusetts, and the four largest tobacco companies.

The MTCP budget fell back to $44 million in fiscal year 2001. This represented an 18 percent decline from the 2000 budget, but was still above the level of earlier years. Fiscal Year 2002 began with a budget of $48 million, but this was cut to $34 million midway through the year. The budget was cut even more drastically during the fiscal year, to $5.7 million. The 2003 budget is approximately one-tenth of the budget in 2000. Moreover, since the 2003 cuts occurred about midway through the year, the monthly funding level for the second half of the year is substantially below the level suggested by the full year's budget. The budget trajectory for 1995-2003 is shown in Exhibit 1.3.[7]

Comparing 2003 to 2000, the largest cuts in dollar value were applied to the media campaign and community based programs, which had been the two largest components of the budget throughout the MTCP's history. The media campaign went from about $20 million in 2000 to near zero in 2003, while local program funding dropped from $24 million to $4 million. Four of the six types of local programs were eliminated entirely during 2003, after having been funded at the level of $12 million in 2000.

Even at the peak in 2000, MTCP funds for reducing tobacco use paled in comparison to tobacco industry advertising and promotional expenditures. Federal Trade Commission figures show that tobacco industry expenditures for advertising and promotion in 2000 totaled $9.57 billion, or about $34 for every man, woman, and child in the United States.[8] The MTCP budget for the same year represented less than $9 per Massachusetts resident.

Exhibit 1.3
Budget for MTCP, excluding School Health Services, 1995-2003



Source: Massachusetts Department of Public Health. Excludes funding for school health services of approximately $5.2 million annually for 1995-2002, which has been included in some prior reports. This funding comes from the Health Protection Fund, but is not operationally part of the MTCP and is not principally directed to tobacco-related activities.

Research and Evaluation

The MTCP not only implements tobacco control programming based on existing knowledge, but also supports research to expand that knowledge. Much of the research carried out in 2001 was featured in a special issue of *Tobacco Control*, an international peer-reviewed journal, which focused on the Massachusetts program.[9]

To assess the effectiveness of Massachusetts' tobacco control efforts, the Department of Public Health funds an external evaluation of the program's overall impact as well as surveys and other related research efforts that focus on individual initiatives. Abt Associates Inc. was selected to carry out the independent evaluation, which began in November 1993.

The remainder of Chapter 1 provides an overview of the substantial progress that has occurred on the key outcomes that MTCP is monitoring. These include three main outcomes measured at the individual level: adult tobacco use, youth tobacco use, and exposure to environmental tobacco smoke. The chapter also reviews progress on tobacco control policies at the local and statewide level.

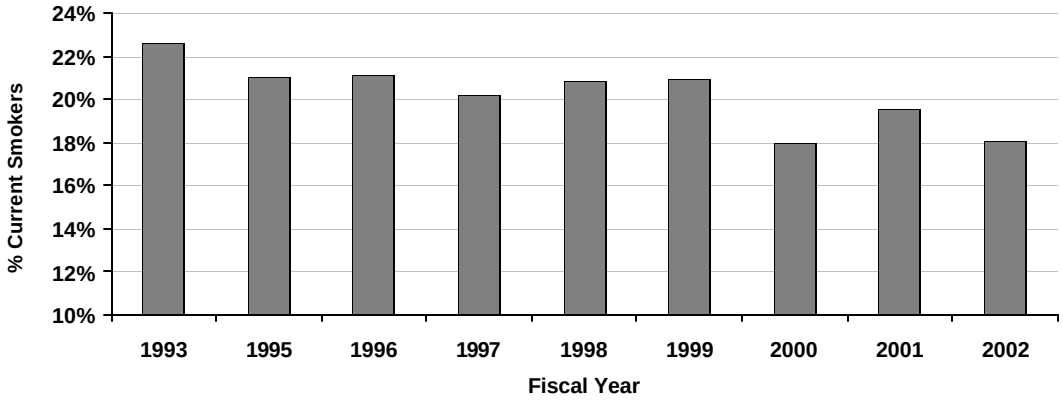
Part 2 of this report presents three analyses exploring the extent to which the observed progress can be attributed to Massachusetts' tobacco control efforts. Chapter 2 updates a previous analysis of adult smoking prevalence, which indicates that smoking prevalence has declined more rapidly in Massachusetts than in states without comprehensive tobacco control programs. Chapter 3 examines the effect of local ordinances that restrict smoking in restaurants, and finds that these restrictions lead to reductions in reported exposure to environmental tobacco smoke. Chapter 4 examines factors associated with successful quitting behavior in Massachusetts, and finds the highest success rates among people who participated in a counseling program and received nicotine replacement therapy.

Decline in Adult Smoking

Adult smoking in Massachusetts has declined since MTCP began in 1993. About 18.1 percent of Massachusetts adults were current smokers in 2002, according to a statewide survey.[10] This represents a reduction of more than 4 percentage points from the 22.6 percent prevalence rate found in 1993,[11] a 20-percent decrease which is statistically significant.[12] Based on the U.S. Census Bureau estimate of the state's population in 2001 (4.87 million over the age of 18),[13] this difference in adult prevalence would amount to 219,000 fewer adult smokers in the Commonwealth.

Prevalence levels found in the Massachusetts surveys have trended downward since 1993, with some year-to-year fluctuation in the estimates, as indicated in Exhibit 1.4.[14]

Exhibit 1.4
Adult smoking prevalence in Massachusetts



Source: Massachusetts Tobacco Survey (1993), Massachusetts Adult Tobacco Survey (1995-2001), UMass Tobacco Study (2001-2002).

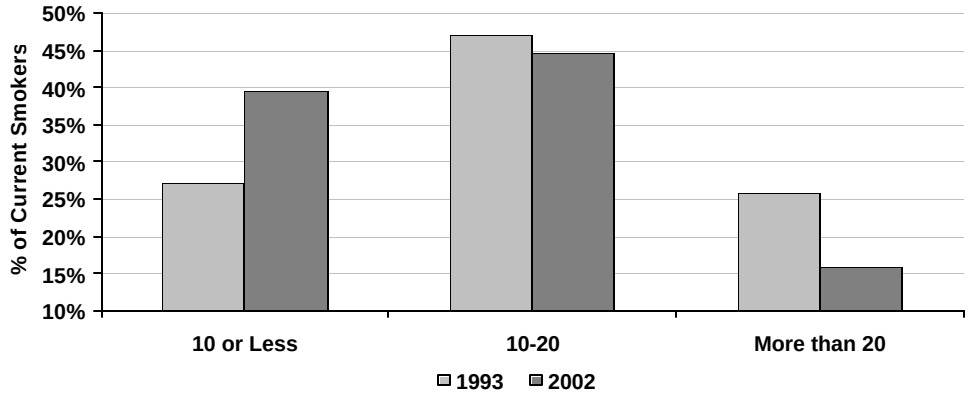
Adult smoking prevalence declined faster in Massachusetts than in most of the United States. From 1990-2000, the downward prevalence trend in Massachusetts was significantly different from the trend in states that did not have comprehensive tobacco control programs during for most of he period (Chapter 3 presents this analysis, which is based on the data from the national Behavioral Risk Factor Surveillance System). This analytic result means that the smoking reduction in Massachusetts can be attributed to the Commonwealth's tobacco control efforts, not to national trends or to changes in the demographic composition of the population. The analysis focuses on the effect for Massachusetts as a whole and therefore does not separate out the contributions of the various tobacco control initiatives, such as the excise tax, the media campaign, and the community-based programs.

Smokers are smoking fewer cigarettes per day. In 2002, 40 percent of Massachusetts' adult smokers reported smoking half a pack of cigarettes or less per day (Exhibit 1.5). This represents a statistically significant improvement from 1993, when only 27 percent smoked less than half a pack a day. Meanwhile, the number of heavy smokers has decreased. Only 16 percent smoked more than a pack a day in 2002, compared to 26 percent in 1993. The average daily number of cigarettes for smokers fell from 19.8 in 1993 to 16.5 in 2002. All of these differences are statistically significant.

Massachusetts' per capita cigarette sales fell sharply. In 1990, cigarette sales in Massachusetts amounted to 126 packs for every resident over age 18. That number declined slightly to 118 packs in 1992. In the following years, when the tobacco control programming and tobacco excise tax mandated by Question 1 were implemented, sales fell dramatically, reaching a level of 72 packs per adult in 2001.

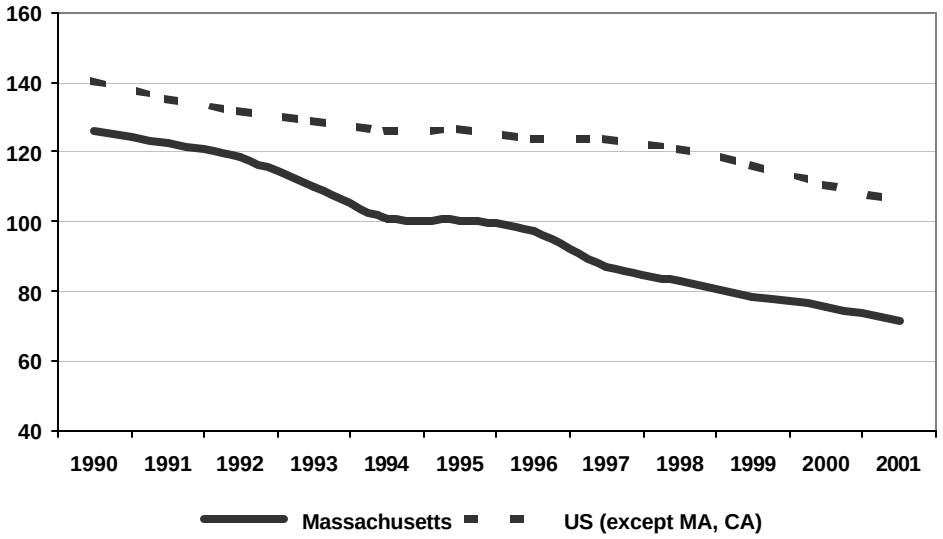
Massachusetts' drop in cigarette consumption was double the size of the decline in the rest of the country. Consumption fell by 40 percent from 1992-2001 in Massachusetts, but by only 20 percent in the other states, as shown in Exhibit 1.6 (California, which also had a comprehensive tobacco control program during this period, is excluded from the comparison).

Exhibit 1.5
Cigarettes smoked per day by adult smokers (age 18+)



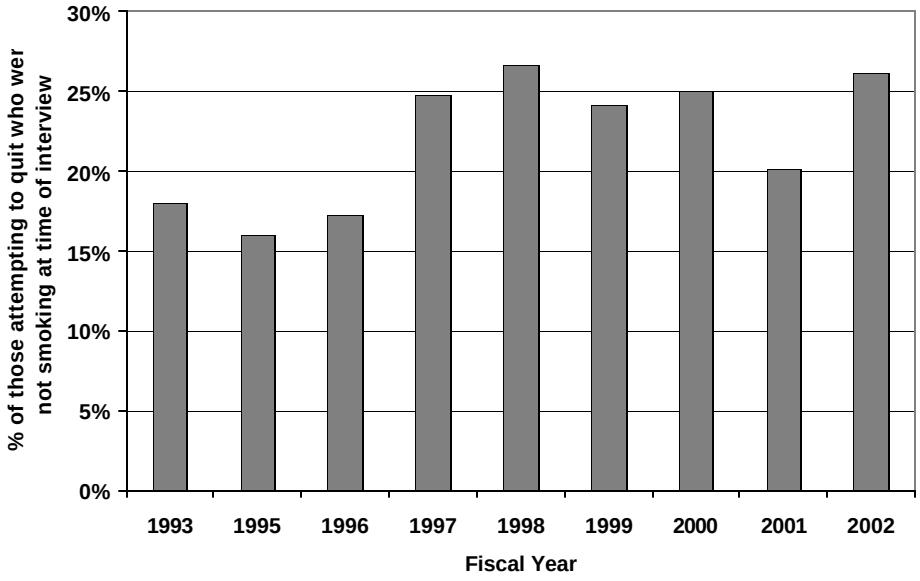
Source: Massachusetts Tobacco Survey (1993), UMass Tobacco Study (2002).

Exhibit 1.6
Packs of cigarettes sold annually per adult (age 18+)



Source: Cigarette purchases from *The Tax Burden on Tobacco*, Vol. 35, 2000. Population estimates from U.S. Bureau of the Census.

Exhibit 1.7
Quit success among those attempting to quit in last year



Source: Massachusetts Tobacco Survey (1993), Massachusetts Adult Tobacco Survey (1995-2001), UMass Tobacco Study (2001-2002).

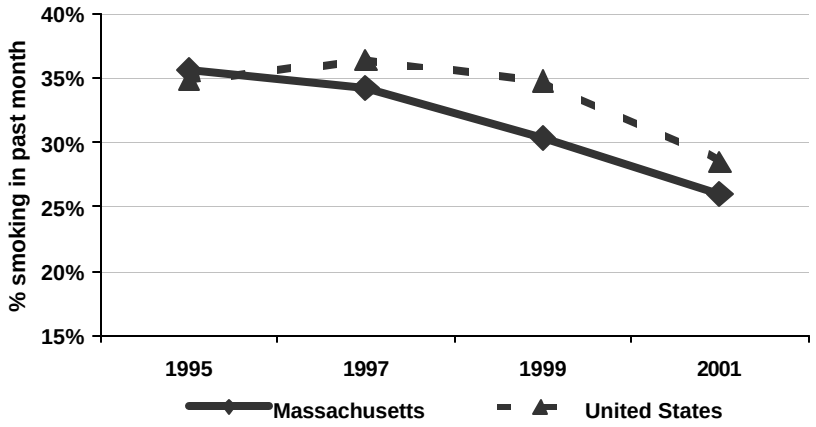
Quit success has grown. Each year approximately half of all Massachusetts smokers quit for at least one day, a proportion that has remained roughly consistent since 1993. Those who attempt to quit have become more successful, however. In the 1993 survey, 18 percent of those who tried to quit in the 12 months prior to their interview were still not smoking at the time of the interview. That proportion has grown with some year-to-year fluctuation, and stood at 26 percent in 2002 (Exhibit 1.7).

Fewer pregnant women are smoking. Vital statistics indicate that smoking prevalence among pregnant women in Massachusetts fell from 17 percent in 1993 to 10 percent in 2000.[15] This 39-percent decline is much steeper than the national decline of 24 percent during the same period.

Youth Smoking Reduction

Declining youth smoking prevalence. According to the 2001 Massachusetts Youth Risk Behavior Survey (YRBS), 26 percent of Massachusetts high school students smoked within the month prior to the survey (Exhibit 1.8).[16] This represents a substantial and statistically significant improvement from the 36 percent smoking rate reported in 1995, and also from the 30 percent rate found for 1999.

Exhibit 1.8
Prevalence of current smoking among high school students



Source: Youth Risk Behavior Survey. Massachusetts Youth Risk Behavior Survey.

Smoking prevalence declined for each grade from 9 through 12, with the greatest reductions observed for the younger grades. This pattern offers hope that the downward trend will continue in future years.

Massachusetts' reduction in youth smoking prevalence has outpaced the decline in the United States as a whole. The Massachusetts and national YRBS prevalence grew in the early 1990s and were about the same in 1995. Since 1995, prevalence has fallen farther and more quickly in Massachusetts.[17] A substantial reduction in the national prevalence from 1999-2001 still left the national rate at 29 percent, compared to 26 percent in Massachusetts.

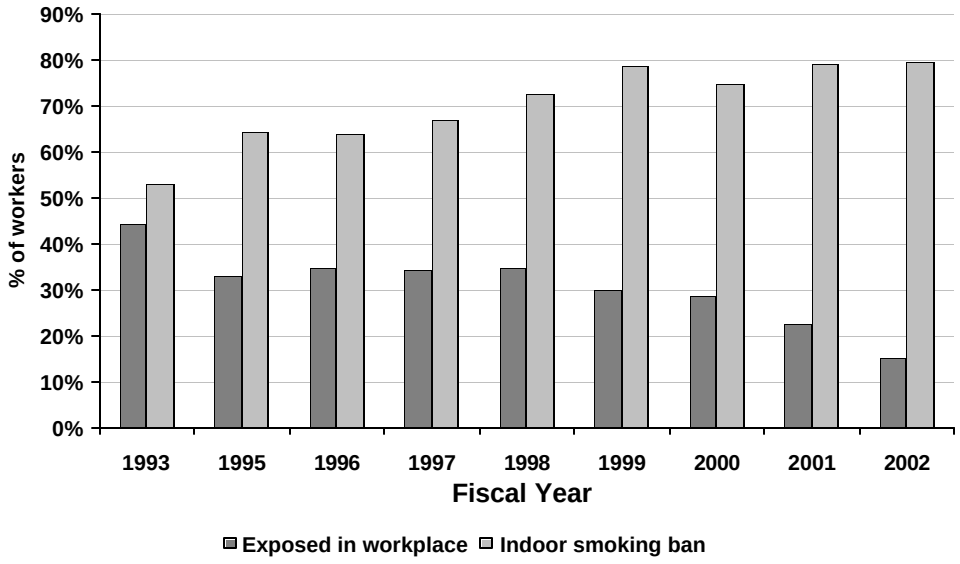
Smokeless tobacco use also fell in Massachusetts. Among high school boys, 7percent reported using smokeless tobacco during the past month in the 2001 YRBS, compared to 17 percent in 1993.

Decreased ETS Exposure

Workplace exposure has been cut substantially. In 2001, 15 percent of Massachusetts residents employed indoors, and outside their home, reported some exposure to other people's tobacco smoke in the week before the surveys (Exhibit 1.9). This represents a reduction of nearly two-thirds from the 44 percent who reported workplace ETS exposure in the 1993 survey. The average weekly exposure in the workplace fell from 4.5 hours to 1.3 hours in the same period. These improvements are statistically significant.

The increase in workplace smoking bans over the 1993-2001 period almost certainly contributes to this reduction. Nearly 80 percent of workers indicated that their workplace had an official policy prohibiting smoking through the building in 2001. This represents a large, statistically significant increase from the 53 percent found in the 1993 survey.

Exhibit 1.9
ETS exposure in the workplace



Source: Massachusetts Tobacco Survey (1993), Massachusetts Adult Tobacco Survey (1995-2001). UMass Tobacco Study (2001-2002)

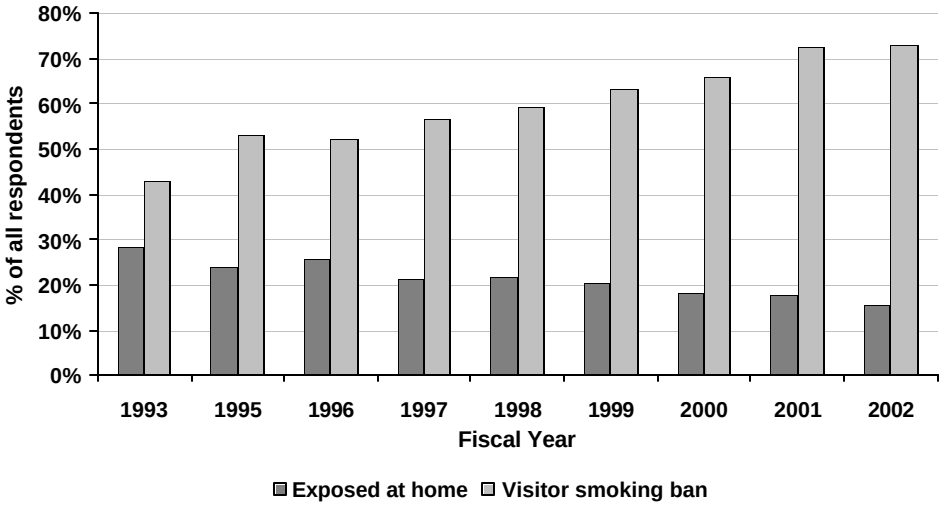
Exposure at home reduced by more than a third. Just 16 percent of Massachusetts residents said they were exposed to other people's tobacco smoke in their home during the week before the 2002 surveys (Exhibit 1.10). This is a reduction of more than one third from the exposure level reported in the 1993 survey (28 percent), a statistically significant difference. The average hours of weekly exposure dropped from 4.7 to 2.4 over that period

The reduced in-home exposure corresponds to a substantial increase in household policies restricting smoking by visitors. In 1993 fewer than half of all Massachusetts residents reported that they forbid smoking by visitors in their homes. This number climbed to 73 percent of households in 2002, a statistically significant improvement.

Exposure in restaurants is declining. In a 2002 survey of Massachusetts residents who eat at restaurants, 37 percent report that they are sometimes, often, or always exposed to other people's tobacco smoke when they eat out (Exhibit 1.11). This a reduction of two-fifths from the 64 percent exposure rate reported by respondents to the 1995 survey, when the question was first asked. This improvement is statistically significant.

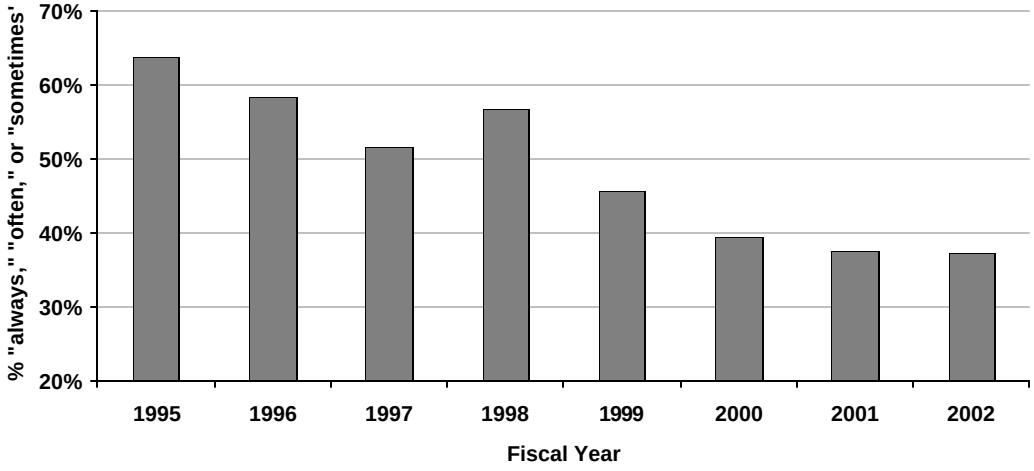
The continued adoption of local ordinances and regulations restricting smoking in restaurants helps bring exposure down. Between 1995 and 2001, the population covered by such restrictions increased from 26 to 78 percent of all Massachusetts residents. Analysis reported in Chapter 3 shows that, after a town adopts a restaurant smoking ordinance, residents of the town report lower levels of exposure to ETS.

Exhibit 1.10
ETS exposure at home



Source: Massachusetts Tobacco Survey (1993), Massachusetts Adult Tobacco Survey (1995-2001). UMass Tobacco Study (2001-2002)

Exhibit 1.11
ETS exposure in restaurants



Source: Massachusetts Tobacco Survey (1993), Massachusetts Adult Tobacco Survey (1995-2001), UMass Tobacco Study (2001-2002).

Increased Local Policy Adoption and Enforcement

Youth access restrictions have become nearly universal. Most Massachusetts towns have now adopted local ordinances or regulations intended to reduce young people's ability to purchase tobacco products and their exposure to local tobacco marketing. By the end of 2001, 252 towns and cities, home to 92 percent of Massachusetts residents, had one or more youth access provisions in place (Exhibit 1.12). This is quadruple the 24 percent population coverage by these provisions in 1993. Analysis reported previously shows that towns that received MTCP funding were significantly more likely than comparable non-funded towns to adopt such provisions.[3]

Establishing licensing requirements for retailers who sell tobacco products is the most common approach to local restriction of youth access, with 87 percent population coverage by the end of 2001. Often these requirements are supplemented by provisions authorizing fines for retailers who sell tobacco to youth under age 18. Many towns also have adopted some form of restriction on vending machine sales, such as a requirement for lockout devices (52 percent population coverage), a ban on vending machine sales of tobacco except in adult-only establishments (32 percent population coverage), or a complete ban on vending machines (25 percent population coverage).

Retailer compliance has improved dramatically. Since 1993, MTCP-funded local boards of health have supervised young people attempting to purchase cigarettes in order to test retailers' compliance with the law prohibiting tobacco sales to persons under age 18. The violation rate–the percentage of purchase attempts resulting in an illegal sale–dropped sharply over time and reached its lowest level in 2002, at 9 percent (Exhibit 1.13). Part of the story is stronger enforcement: local boards of health have increased both their monitoring intensity and their use of penalties (citations, fines, or license suspensions) when they find violations.

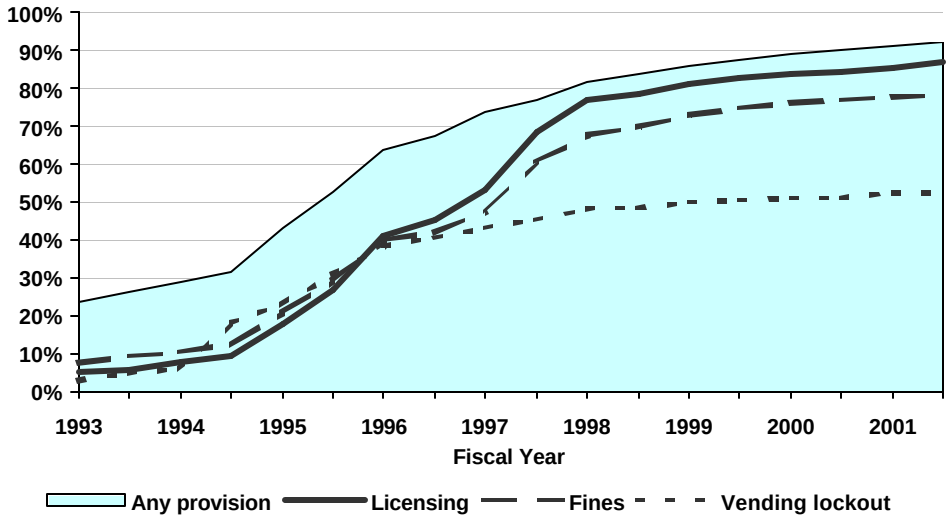
Local ETS restrictions have dramatically increased. By the end of fiscal year 2001, 85 percent of Massachusetts residents lived in a town with some form of restriction on smoking in public places (Exhibit 1.14). This is four times the 22 percent who were protected in 1993, when MTCP began.

Restaurant smoking restrictions protected 78 percent of Massachusetts residents in 182 cities and towns, making this the single most common type of local ETS policy. Complete restaurant smoking bans were in place in 127 of those towns, covering 53 percent of the state's population.

Continued public support for strong clean indoor air policies. Support for smoking bans in public places keeps growing, as can be seen in Exhibit 1.15. By 2001-2002, 60 percent or more of

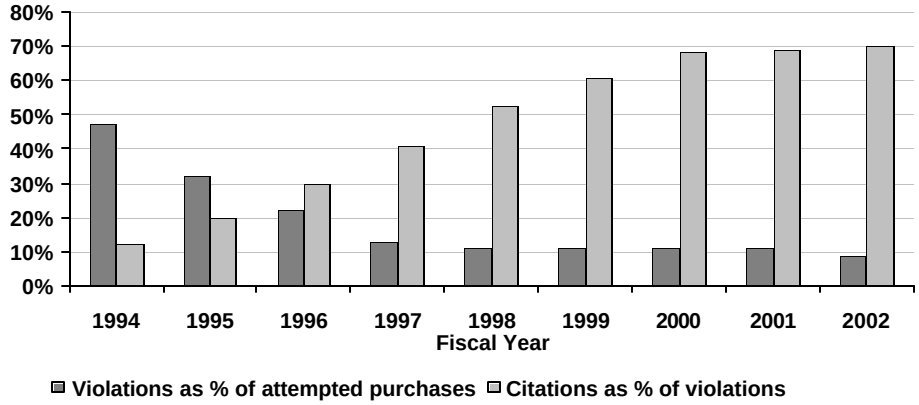
Massachusetts residents supported complete smoking bans in shopping malls, public buildings, indoor sporting events, and restaurants. Support for each of these policies has increased significantly since 1995.

Exhibit 1.12
Percent of population covered by youth access provisions



Source: Massachusetts Department of Public Health.

Exhibit 1.13
Results of underage purchase attempts



Source: MTCP Management Information System.

Stronger State-level Policies

Since the Massachusetts electorate supported Question 1 in 1992, tobacco control policies in Massachusetts have strengthened remarkably. Legislation, regulation, litigation, and persuasion have led to a broad array of governmental and private sector policies designed to reduce the tobacco-related public health risk. Some of these policy changes occurred as the direct result of MTCP actions. Most were influenced or facilitated by the changes in public attitudes described in this report. The list below suggests the breadth of the policy activity:

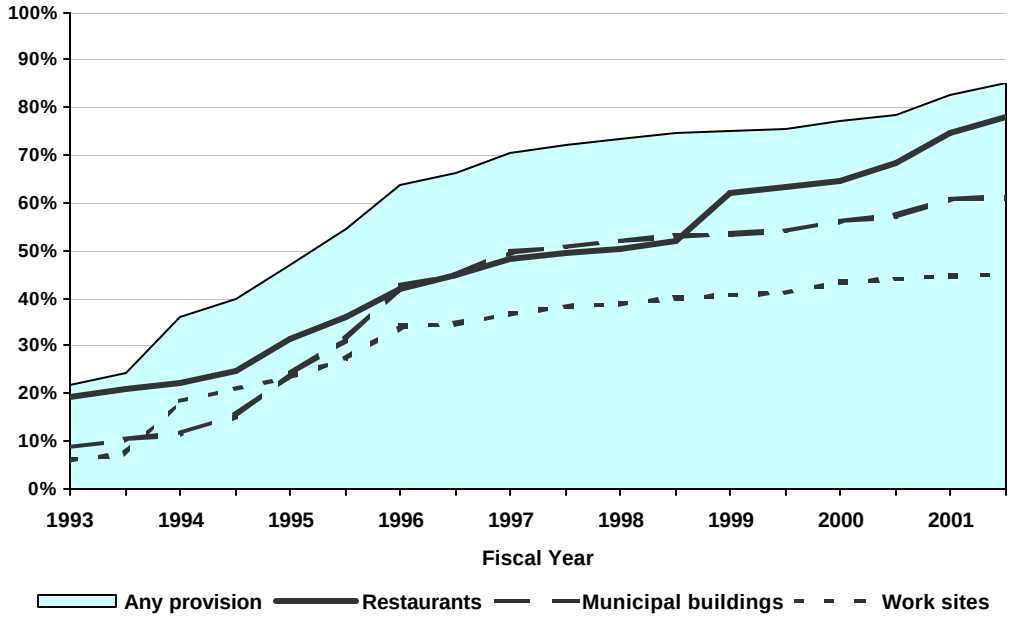
Tax and economic policies

- Cigarette excise tax increases of $0.25 per pack in 1993 and 1996, and $0.75 in 2002;
- Smokeless tobacco excise tax increases of 25 percent of wholesale price in 1993 and 1996 and 15 percent in 2002;
- New cigar excise tax of 15 percent in 1996, increased to 30 percent in 2002;
- State pension fund prohibited from investing in tobacco companies in 1998; and
- Increase in cigarette prices resulting from Master Settlement Agreement in 1998.[18]

Tobacco product advertising restrictions

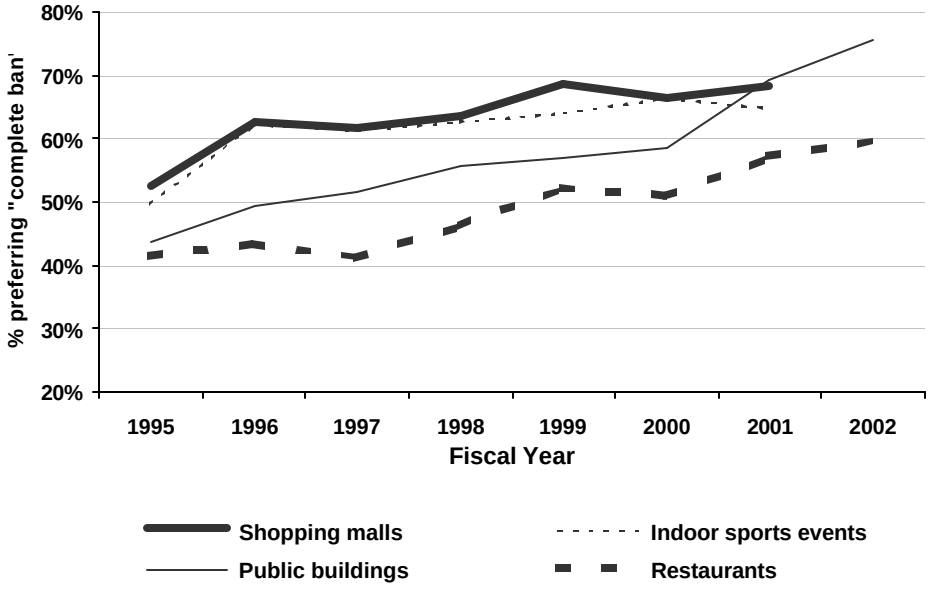
- Elimination of stadium tobacco advertising by the Boston Red Sox and the New England Patriots, upon DPH request (1995);
- Ban on outdoor tobacco advertising as part of Master Settlement Agreement, with Massachusetts playing a strong role in 46-state negotiations (1998);
- Boston Globe refuses to accept cigarette advertising upon DPH request (2000); and
- Phillip Morris, Brown & Williamson, and Lorillard agree to drop advertising in magazines with 15 percent or more youth readership, after DPH research shows that such advertising increased after the MSA (2000). Similarly, US Smokeless Tobacco curtails advertising in the wake of DPH research and a California court case (2000).

Exhibit 1.14
Percent of population covered by ETS provisions



Source: Massachusetts Department of Public Health.

Exhibit 1.15
Public support for clean air policies



Source: Massachusetts Adult Tobacco Survey (1995-2001); UMass Tobacco Study (2001-2002) for questions on restaurants and public buildings; questions on indoor sports events and shopping malls not asked.

Smoking restrictions in public places

- Educational Reform Act prohibits smoking by any person in public and secondary schools (1993);
- New England Shopping Mall Associates bans smoking in the 13 largest malls in Massachusetts, upon DPH request (1995);
- Boston Red Sox and New England Patriots ban smoking in stadiums after DPH request (1995), and Red Sox extend the ban to the entire park (2000); and
- Massport bans smoking in the three airports it manages: Logan, Hanscom, and Worcester (1996).

Consumer protection

- Tobacco product disclosure law requires manufacturers to report on cigarette nicotine and additives (1996, still in litigation);
- DPH proposes regulations requiring manufacturers to report levels of toxic ingredients in cigarettes (1999, still in negotiation);
- Attorney General promulgates regulation requiring cigar package warnings, contributing to national consent agreement for warnings on packages and magazine advertising (1999); and
- Attorney General promulgates regulation prohibiting self-service displays of tobacco products and requiring a photo ID verification of purchases by persons appearing to be under 27 years of age (1999).

The Role of the MTCP in Achieving Gains

The preceding sections demonstrate substantial progress in achieving the goals of the Massachusetts Tobacco Control Program. This includes all three of the program's primary goals–reducing adult tobacco use, reducing youth tobacco use, and reducing exposure to environmental tobacco smoke. In addition, progress is evident on a broad array of secondary objectives such as reducing retail tobacco sales to youth, restricting smoking in public places, and moving public attitudes and social norms towards less acceptance of tobacco use.

This progress is extremely important by itself. But it is also important to ask whether the progress resulted from Massachusetts' tobacco control efforts, or whether it would have occurred even in the absence of those efforts.

Research has revealed strong evidence of a "Massachusetts effect" on the main measures of tobacco use. Analyses conducted as part of the evaluation show that both adult and youth smoking prevalence have declined faster in Massachusetts than in the nation as a whole, even after adjusting for differences in demographic composition.[19] National statistics also show steeper declines in Massachusetts than the nation for smoking during pregnancy and per-capita cigarette sales.

What are the specific causes of the Massachusetts effect? Past research has indicated that taxes, statewide and local regulations, media campaigns, and local tobacco control programs can all contribute to improved tobacco outcomes. Moreover, these factors probably reinforce one another. For example, the recently adopted tobacco tax increases and local regulations might not have been possible without the growth in public support for tobacco control that occurred since 1993. The educational efforts of the media campaign and the local programs most likely contributed to that growth in public support.

Only a few analyses have attempted to untangle this web of possible causes. One analysis found that both the level of excise taxes and the level of tobacco control program expenditures (combining all program components) have had significant impact on per-capita cigarette sales.[20] The author estimated that 55 percent of the Massachusetts decline in cigarette sales from 1992-1998 resulted from the programmatic activities.[21] Other analyses have shown that MTCP funding for local programs increases the likelihood that a town will adopt tobacco control ordinances and regulations,[22] and the analysis presented in Chapter 3 indicates that such ordinances have resulted in reduced ETS exposure. The ordinance analysis shows a significant effect of a single program component, namely the funding of local Boards of Health.

In short, it is clear not only that important progress has occurred in Massachusetts, but that this progress did not simply mirror national trends that were happening at the same time. The evidence suggests that multiple Massachusetts initiatives–at least the excise tax increases, the MTCP programming as a whole, and the activities of local Boards of Health–have contributed to this favorable result. It will be important for further research to explore the question of which program components contributed which effects, and what happens when the program components are terminated or drastically reduced.

Endnotes

[1] *Smoking-Attributable Mortality, Morbidity, and Economic Costs. Massachusetts, 2000* and similar reports for 1996, 1997, and 1998. Jayne West and Bruce Cohen. Bureau of Health Statistics, Research and Evaluation, Massachusetts Department of Health. April 2002.

[2] *Investment in Tobacco Control - State Highlights 2001.* A report of the Centers for Disease Control and Prevention, Office on Smoking and Health (OSH). 2001. Available at http://www.cdc.gov/tobacco/statehi/statehi_2001.htm Accessed March 26, 2001.

[3] Hamilton W, Norton G, Weintraub J. *Independent Evaluation of the Massachusetts Tobacco Control Program. Seventh Annual Report. January 1994 to June 2000.* Cambridge, MA. Abt Associates Inc. 2002.

[4] Farelly MC, Chaloupka FJ, and Pechacek TF. The Impact of Tobacco Control Program Expenditures on Aggregate Cigarette Sales: 1981-1998. NBER Working PaperNo. 8691. December 2001.

[5] Massachusetts General Laws, Chapter 29, Section 2GG.

[6] These totals exclude the portion of the Health Protection Fund allocated to the School Health Services program, which funds comprehensive health care clinics. That allocation, amounting to $5.2 million annually from 1995-2002, is sometimes reported as part of the tobacco control budget. Figures reported here also exclude "earmarked" programs, which are mandated by the legislature as expenditures from the tobacco control budget but are not controlled or administered by the MTCP. Funding for earmarked programs amounted to $0.5 million in FY 2002 and $0.2 million in FY 2003.

[7] Fiscal Year 1994, not shown in the table, had a nominal budget of $57 million. Because most program activities did not begin until late in the fiscal year, however, actual spending was much less than the budgeted amount. Expenditures were quite close to the budget figures shown for subsequent years, except that budget reductions midway through 2002 meant that expenditures were considerably less than the budget.

[8] *Federal Trade Commission Cigarette Report for 2000.* Issued in 2002. Washington, DC: Federal Trade Commission. U.S. and Massachusetts population figures used in calculating per capita expenditures are from the 2000 Census.

[9] Tobacco control in Massachusetts: making smoking history. *Tobacco Control* 2002; 11 (Suppl II).

[10] This estimate is based on data from UMass Tobacco Study, conducted by the Center for Survey Research at the University of Massachusetts, Boston. The survey was conducted from January 2001 through June 2002. The study design is described in Biener L and Hamilton W. The Relationship of Town Characteristics To Perceived Social Norms. Boston: University of Massachusetts, Boston. Forthcoming.

[11] The 1993 estimate comes from the Massachusetts Tobacco Survey (MTS). This survey, also conducted by the Center for Survey Research at the University of Massachusetts, Boston, is documented in Biener, L., Fowler FJ Jr., and Roman AM, 1993 Massachusetts Tobacco Survey: Tobacco Use and Attitudes at the Start of the Massachusetts Tobacco Control Program. 1994, Center for Survey Research, University of Massachusetts: Boston, MA.

[12] Statements regarding statistical significance refer to probabilities of 0.05 or less unless otherwise noted.

[13] The estimated Massachusetts population for 2001 is 6,379,304. Estimates by age were not available for 2001, so the total was multiplied by the proportion of Massachusetts population aged 18 or more in the 2000 census (76.4 percent).

[14] Estimates for 1995-2000 are based on the Massachusetts Adult Tobacco Survey (MATS). The MATS was conducted from March 1995 through December 2000 by the Center for Survey Research at the University of Massachusetts, Boston. The MATS design is documented in Biener L, Nyman AL, Roman AM, et al. *2000 Massachusetts Adult Tobacco Survey: Technical Report and Tables*. Boston MA: Center for Survey Research, University of Massachusetts. 2002. The estimate for fiscal year 2001 combines data from the MATS (for July-December 2000) and from the UMass Tobacco Study survey described earlier (January-June 2001).

[15] Rates for 1990-1996 are taken from: Matthews T. Smoking During Pregnancy, 1990-1996. *National Vital Statistics Reports.* 1998; 47-10, 1-11. Figures for 1997-1999 come from: Mathews, T. Smoking During Pregnancy in the 1990s. *National Vital Statistics Reports* 2001; 49-7,1-12. Figures from 2000 are from: Centers for Disease Control and Prevention. DATA 2010: the Healthy People 2010 Database, September 2002 Edition.. Available at http://wonder.cdc.gov. Accessed on December 12, 2002.

[16] Abbruzzese B, Goodenow C. *Preventing Tobacco Use Among Massachusetts Youth: Programs and Results*. Malden, MA: Massachusetts Department of Education, 2002.

[17] Centers for Disease Control and Prevention. Trends in Cigarette Smoking Among High School Students – United States, 1991-2001. *MMWR* 2002; 51: 409-412.

[18] Donovan, D. The Giant Tobacco Robbery. *Forbes Magazine*. January 22, 2001. The author estimates that tobacco company payments to states amount to $0.49 per pack and that price increases since November 1998 amount to $0.96 per pack.

[19] The analysis of adult prevalence is presented in Chapter 2. The analysis of youth prevalence was presented in Hamilton W, Norton G, Weintraub J. *Independent Evaluation of the Massachusetts Tobacco Control Program. Seventh Annual Report. January 1994 to June 2000.* Cambridge, MA. Abt Associates Inc. 2002.

[20] Farrelly MC, Chaloupka FJ, Pechacek, TF. The Impact of Tobacco Control Program Expenditures on Aggregate Cigarette Sales: 1981-1998. NBER Working Paper No. 8691. December 2001.

[21] Farrelly MC. Antismoking campaigns work, data show. Letter to the editor. *Boston Globe*. December 9, 2002.

[22] Bartosch WJ, Pope GC. Local Enactment of Tobacco Control Policies in Massachusetts. *Am J Public Health* 2002 92: 941-943. Hamilton W, Norton G, Weintraub J. 2002, op. cit.